



wi4 WiMAX

WAP 800 Series Access Point

This multiple antenna access point, featuring beamforming antenna techniques, provides flexible deployment options to meet a service provider's unique network requirements.

WAP 800 SERIES ACCESS POINTS

Deep Indoor Penetration, Wide Area Coverage and High Capacity

The WAP 800 with multiple antennas provides up to four times more gain in downlink transmit and eight times more gain in uplink receive compared to a single antenna system. In addition, use of smart antenna algorithms enhances the coverage and capacity of the WAP 800. The WAP 800 benefits from beamforming techniques which use subscriber feedback to adaptively direct antenna beams. Beamforming techniques not only enhance gain for subscribers, but also reduce interference. The WAP 800 utilizes eight receive antennas which provide superior uplink budgets that enable user data rates similar to the speed of cable broadband rates.

Integrated, Zero-Footprint Design Offers Low CAPEX & OPEX

The WAP 800 has an integrated design that provides high availability, reduced real estate requirements, redundancy, and simple connections between components. Flexible hardware and software programmable radios provide no-touch software updates. Integrated RF antenna design eliminates the need for costly, heavy coaxial cables between the multiple antennas and baseband modules. This integrated design avoids power loss and tower loading issues associated with heavy, RF coaxial cables.

The WAP 800 has an IP end-to-end design. Its flat IP network architecture eliminates high-cost, centralized boxes, simplifies management, and reduces core transport costs. Connectivity to standard IP equipment allows operators to realize significant cost advantages.

The WAP 800, like Motorola's entire wi4 WiMAX product portfolio, offers ease of installation, management and operation. The WAP 800 Series features low power consumption, software defined radios, multiple regulatory compliances, small, "zero-footprint" base sites with an all-outdoors design and flexible mounting options for both the smart antenna RF Modules and the Base Control Unit.

Fixed & Mobile Application

The WAP 800 provides Non-Line-of-Sight, fixed and mobile wireless broadband connections with high capacity in even the most challenging environments. The WAP 800 can dynamically select beamforming techniques that are optimized for fixed and mobile applications. This gives subscribers consistently transparent, high throughput in all environments.

The WAP 800 (4X8) multiple antenna access point with significantly higher link budget and flat IP architecture fits well with the rest of the Motorola Flexible Access Point System and will support seamless inter-technology handovers. The WAP 800 with common IP core features low latency performance, WiMAX certified QoS (Quality of Service), traffic prioritization, and security that interoperates and provides excellent performance not only for the conventional applications but also for the next generation mobile broadband based applications.

Why Motorola

Motorola is uniquely positioned to address the wireless broadband market through the MOTOwi4™ vision. Motorola has aligned its business units and roadmaps to provide a comprehensive, end-to-end solution covering all aspects of the broadband wireless access deployment. With our deep and extensive patent portfolio, over a decade of R&D investment, and our experience as a global supplier of broadband wireless access solutions, Motorola's WAP 800 delivers a best in class smart antenna access point solution. Motorola is committed to leading the industry with end-to-end WiMAX solutions addressing the full scope of the operator's deployment needs including access, core, devices, network management and services.

WAP 800 Access Point System Specifications

Application	Fixed and Mobile
Base Site Architecture	Active RF modules with integrated antennas and high-speed digital connections to Base Control Unit over fiber
Frequency Bands	3.5 GHz (3.400 – 3.600 GHz)
Channel Bandwidth	5 or 7 MHz
Air Interface	IEEE 802.16e-2005 (S-OFDMA)
Duplex Mode	TDD
Transmit / Receive Chains	4/8
Antenna Elements	8
Frequency Reuse	Up to 4 sectors with N=2
Physical Dimensions -	
Integrated Smart Antenna RF Module	(HxWxD): 1016 x 580 x 351mm (40"x23"x14") Weight: 75kg (165 lbs) [No FRU > 15 lbs]
Base Control Unit	(HxWxD): 813 x 508 x 508 mm (32" x20" x20") Weight: 68 kg (150 lbs)
Operating Temperature	-40°C to 55°C Outdoor and Indoor
Modulation and Coding	QPSK (coding rates of 1/2 and 3/4) 16QAM (coding rates of 1/2 and 3/4) 64 QAM DL (coding rates of 1/2, 2/3, 3/4, and 5/6)-downlink
EIRP	Up to 59dBm
Power Inputs	-48V DC or 88-240 VAC
Traffic Prioritization Features	Supports IEEE 802.1Q, Layer2 IEEE 802.1p, IPv4 Diffserv (DSCP)
QoS	Supports Unsolicited Grant Service (UGS), Real-time Polling Service (rtPS), Extended Real-time Polling service (ertPS), Non-real-time Polling Service (nrtPS) and Best Effort (BE)
Security	Supports EAP authentication, CCM-AES 128bit data encryption and authentication, PKMv2 key management protocol
Baseband Control Unit to RF Module Cabling Connection	Optical Fiber, DC Power
Backhaul Interface	IEEE 802.3 (10/100/1000 Base T Ethernet)
Availability	Up to 99.999%
Regulatory Compliance	ETSI type approved & RoHS/WEEE compliant



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